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ASSIGNMENT BOOKLET 5B

Mathematics 4
Module 5: Days 12–20

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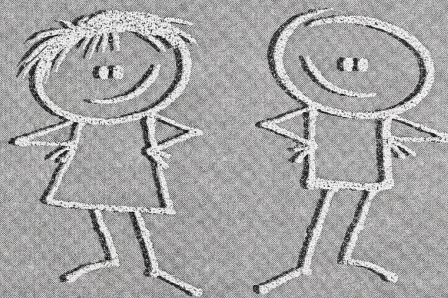
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Mathematics 4

Module 5 Multiplication



Assignment Booklet 5B



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Summary

	Total Possible Marks	Your Mark
Day 12	24	
Day 13	32	
Day 14	36	
Day 15	36	
Day 16	20	
Day 17	44	
Day 18	36	
Day 10	(1) 72	
	(2) 10	
Day 11	(1) 11	
	(2) 5	
Total	326	

Teacher's Comments

This document is intended for

Students	✓
Teachers	✓
Administrators	
Home Instructors	✓
General Public	
Other	

Mathematics 4
Module 5: Multiplication
Assignment Booklet 5B
Learning Technologies Branch
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ASSIGNMENT BOOKLET 5B

MATHEMATICS 4 – MODULE 5: MULTIPLICATION

Notes to the Home Instructor

Learning Tasks

The nine mathematics modules and the accompanying Assignment Booklets have been developed so that students become involved in a variety of learning tasks that help them develop mathematical skills, learn how to communicate mathematically, and become mathematical problem solvers.

When completing the assignments, students should work carefully and neatly. Students should do the activities in the Assignment Booklets **independently**. This will ensure that the teacher acquires a more accurate picture of the student's ability and understanding.

If the student is having difficulties, he or she should review the appropriate sections in the Student Module Booklet. The home instructor can assist the student by reviewing these sections with the student and encouraging him or her to explain, describe, or demonstrate (using manipulatives, drawings, and so on) his or her understanding of a particular concept or idea.

Assessment and Evaluation

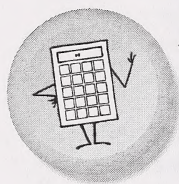
A broad range of assessment tools will be used to gather information for the purpose of evaluating the student's knowledge and understanding of curriculum skills and concepts. It is important that the teacher learns how the student thinks about mathematics as well as what concepts and skills the student has mastered. Assignment Booklet questions, journal entries, performance assessments, observations by the home instructor, and student self-evaluation pages may all be used. As well, the teacher may also use a final test.

In order to give the student and home instructor feedback on the student's current level of achievement throughout the school year, the student's teacher will provide written comments and assign a grade at the end of each module. The mark for each module will be determined primarily by how well the student completes the assignments in the Assignment Booklets. However, other broad-based assessment techniques (journal entries, performance assessments, and so on) may also be used.

24

Day 12: Problem Solving

Use the Looking for a Pattern strategy to solve at least three of the following problems. For the other two, you may use whatever strategy you wish. Show all of your work and use a sentence to answer the question.



You may use a calculator if you wish.

4

1. Sara hung a new birdfeeder in her yard. On the first day, 58 birds came to feed. On the second day, 68 birds came. On the third day, 60 birds came. On the fourth day, 70 birds came. On the fifth day, 62 birds came to feed. How many birds will come to feed on the tenth day?

- ④ 2. Mr. Brown had 24 cement blocks to sell. At the end of the first week, he had 21 blocks left. At the end of the second week, he had 20 blocks left to sell. After three weeks, he had 17 blocks left. At the end of the fourth week, he had 16 blocks left to sell. If Mr. Brown continues to sell the cement blocks at the same rate, in what week will he sell the last one?

- ④ 3. There is a new display at the art gallery in Abe's town. On Saturday, 25 people came to view the display. On Sunday, 42 people came to see the display. On Monday, 59 people came. If the pattern continues, how many people will see the new display on Friday?

In one week, how many people **in all** will have seen the new art display at the gallery? _____

- ④ 4. Brian and Ari go rollerblading every evening. On Monday evening, Brian rollerbladed 2 km, while Ari rollerbladed 5 km. On Tuesday, Brian rollerbladed 3 km and Ari rollerbladed 7 km. On Wednesday, Brian went 4 km and Ari went 9 km.

If the pattern for each boy continues, how many kilometres will each of them rollerblade on Saturday?

5. A man worked 5 days in a row. The first day he was paid \$36. Each day after that he was paid \$10 more than the day before.

④














- a. How much did he earn on Day 5?

①

- b. What was the total amount he earned after five days?

③

6. Complete the pattern by drawing hearts in the empty boxes.

32

Day 13: Estimation and Multiplication

②

1. Write the rule for rounding to the nearest 10.

a. You round down when the one's digit is _____.

b. You round up when the one's digit is _____.

④

2. Round the following numbers to the nearest 10.

a. 45 is rounded to _____. b. 96 is rounded to _____.

c. 131 is rounded to _____. d. 204 is rounded to _____.

⑥

3. Round the **larger** factor to the nearest 10. Then find the **product** for each of the following.

a. $8 \times 51 =$

b. $76 \times 8 =$

c. $45 \times 9 =$

4. Use estimation to find the answer for these word problems. Write a sentence answer for each.

②

- a. Jennifer calculated 84×6 to be 474. Without actually calculating, how can you tell that her answer is wrong?

- ② b. Andrew saw a sign in a store that advertised rollerblades. They cost \$48 a pair. If he buys three pairs of rollerblades, about how much money will he spend?

- ② c. On a bike trip, Josh and Justin rode about 35 km a day. About how far did they travel in one week?

- ③ 5. Use the example to help you rename or expand the following numbers.


Example 1: $431 = 4 \text{ hundreds } 3 \text{ tens } 1 \text{ one}$

a. $678 =$ _____

b. $8 \text{ hundreds } 6 \text{ tens } 5 \text{ ones} =$ _____

c. $93 \text{ tens} =$ _____

6. Draw base ten diagrams to complete these multiplication sentences. Write the completed multiplication sentence.

③ a. $84 \times 7 =$ 

③

b. $65 \times 4 =$



7.

Journal Entry

Explain how base ten blocks can help you multiply.

⑤

36

Day 14: Multiplying Two-Digit Numbers by One-Digit Numbers

4

1. Expand these numbers.

a. $63 =$ _____

b. $26 =$ _____

c. $74 =$ _____

d. $11 =$ _____

8

2. Find the following products by using expansion. Remember to use brackets!

a. 63×4

b.
$$\begin{array}{r} 37 \\ \times 5 \\ \hline \end{array}$$

c. 49×7

d.
$$\begin{array}{r} 96 \\ \times 5 \\ \hline \end{array}$$

- ⑥ 3. Use place-value charts to find the products of these factors.

a.

H	T	O
	6	4
		$\times 7$

b.

H	T	O
	8	3
		$\times 6$

c.

H	T	O
	7	5
		$\times 9$

- ⑥ 4. Multiply the following numbers using the long form for multiplication.

a.

$$\begin{array}{r} 48 \\ \times 4 \\ \hline \end{array}$$

b.

$$\begin{array}{r} 92 \\ \times 8 \\ \hline \end{array}$$

c.

$$\begin{array}{r} 38 \\ \times 7 \\ \hline \end{array}$$

5. Solve the following word problems. Write a sentence answer for each. Remember, it is a good idea to estimate first so you know if your answer is reasonable!

④

- a. Marla has 9 quarters. If she exchanges them for pennies, how many pennies will she have?

Estimate:

Sentence answer: _____

④

- b. Lin blinks 23 times in a minute. How many times will he blink in 5 minutes?

Estimate:

Sentence answer: _____

④

- c. Connie is helping her neighbour replace fence posts on his farm. They replace 17 posts per day. How many posts will they replace in 6 days?

Estimate:

Sentence answer: _____

36

Day 15: The Short Form for Multiplication

1. Use a place-value chart to multiply the following factors.

4

a.

H	T	O
	8	6
		$\times 4$

b.

H	T	O
	6	6
		$\times 5$

c. 78×3

d. 94×6

4

2. Estimate first and then find the product of the following. Show how you regroup!

Estimate

a.
$$\begin{array}{r} 46 \\ \times 7 \\ \hline \end{array}$$

Estimate

b.
$$\begin{array}{r} 80 \\ \times 9 \\ \hline \end{array}$$

Estimate

c.
$$\begin{array}{r} 77 \\ \times 7 \\ \hline \end{array}$$

Estimate

d.
$$\begin{array}{r} 38 \\ \times 4 \\ \hline \end{array}$$

3. Find the product of 74 and 8 in three different ways. Use the expanded form, the long form, and the short form for multiplication.

②

a. Expanded Form

②

b. Long Form

②

c. Short Form



4.

Journal Entry

5

Explain in your own words which method of multiplication is best for you and why.

- ③ 5. Round these numbers to the **nearest 100**.
- a. 482 is rounded to _____.
 - b. 738 is rounded to _____.
 - c. 555 is rounded to _____.
- ④ 6. Estimate the product by rounding the **larger factor** to the nearest 100. Attach zeros if you need to!
- a. $310 \times 8 =$ _____
 - b. $669 \times 4 =$ _____
 - c. $506 \times 7 =$ _____
 - d. $835 \times 4 =$ _____
7. First estimate and then calculate to find the products for the following problems. Use a sentence to answer the question asked.
- ⑤ a. Steven works in a candy store. His job is to check 110 bins and keep them filled. He checks each bin 3 times a day. How many bins does he check each day?

Sentence answer: _____

- ⑤ b. A basketball player averages 39 points a game. How many points will he score in 7 games?

Sentence answer: _____

20

Day 16: Multiplying Three-Digit Numbers by One-Digit Numbers

②

1. Rename the following numbers. An example has been done for you.

Example: $3975 = 3$ thousands 9 hundreds 7 tens 5 ones

a. $1973 =$ _____

b. $8492 =$ _____

②

2. How many thousands and hundreds are in the following numbers?

a. 56 hundreds = _____ thousands _____ hundreds

b. 29 hundreds = _____ thousands _____ hundreds

③

3. Draw base ten diagrams to show 367×4 . Complete the multiplication sentence.

$367 \times 4 =$ _____

③

4. Draw base ten diagrams to show 859×5 .

$$859 \times 5 = \underline{\hspace{2cm}}$$

5. Solve each of the following problems. Remember to show your work and to state the answer in a sentence. **Estimate first** by rounding to the nearest hundred.

⑤

- a. Dave's family is on a holiday. They drive 420 km each day. How far will they drive in 7 days?

Estimate

Sentence answer: _____

⑤

- b. Computer disks come in boxes of 150. How many computer disks are in 6 boxes?

Estimate

Sentence answer: _____

44

Day 17: More About Multiplying Large Numbers

⑥

1. Use the expansion method to find these products. Remember to expand, multiply, and add.

a.
$$\begin{array}{r} 792 \\ \times 5 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 853 \\ \times 8 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 626 \\ \times 9 \\ \hline \end{array}$$

⑧

2. Use the long form for multiplication to find these products.

a.
$$\begin{array}{r} 654 \\ \times 6 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 763 \\ \times 9 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 975 \\ \times 5 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 460 \\ \times 7 \\ \hline \end{array}$$

3. Solve the following word problems. Estimate first by rounding to the nearest hundred then find the actual product. Show all of your work and write a word sentence that answers the question asked in the problem.

⑤

- a. A box of cereal has 954 g of cereal. How many grams are there in 7 boxes of cereal?

Estimate

Actual Product

Sentence answer: _____

⑤

- b. A farmer is hauling wheat to the elevator. His truck can hold 653 bushels of wheat. How many bushels will he haul if he makes 9 trips to the elevator?

Estimate

Actual Product

Sentence answer: _____

- ⑤ c. There are 975 kernels of popcorn in one bag. How many kernels are there in 7 bags?

Estimate

Actual Product

Sentence answer: _____

- ⑤ d. A family is staying in a hotel that costs \$129 a night. If they stay for a week, how much will their hotel bill be?

Estimate

Actual Product

Sentence answer: _____

- ⑤ e. Jason wants to surprise his sister and give her \$10 in pennies. How many pennies will he give her?

Estimate

Actual Product

Sentence answer: _____



4.

Journal Entry

⑤

Think of a time when you or a family member estimated the product of two numbers. Perhaps recall a time in a store when you were buying a quantity of items, or maybe you had to estimate totals of groups of people, papers, snacks, or minutes. Describe the incident. Why was an estimate helpful?

36

Day 18: Using the Short Form to Multiply Large Numbers

8

1. Use the short form for multiplication to find the products. Show your regrouping!

a.
$$\begin{array}{r} 653 \\ \times 7 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 984 \\ \times 8 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 788 \\ \times 5 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 536 \\ \times 4 \\ \hline \end{array}$$

2. For each of the following, find the actual product first. Then check the reasonableness of your answer by estimating. Round the larger factor to the nearest 100.

4

a. $657 \times 4 =$

Actual Product**Estimate**

④

b. $376 \times 7 =$

Actual Product**Estimate**

⑥

3. Multiply to find the products.

a.
$$\begin{array}{r} 410 \\ \times 9 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 751 \\ \times 6 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 532 \\ \times 2 \\ \hline \end{array}$$

4. Solve the following word problems. Estimate the answer first and then solve. Write a sentence answer.

- ⑤ a. Aunt Freda drove 375 km on the first day of her trip. On the second and third days, she also drove 375 km. How many kilometres did she drive in all?

Estimate

Actual Product

Sentence answer: _____

- ⑤ b. A tree farmer has 8 apple trees in his orchard. Each tree produces 635 apples. How many apples do the trees produce?

Estimate

Actual Product

Sentence answer: _____

- ④ 5. Find the products. Look for pairs of numbers that are easy to multiply.

a. $6 \times 4 \times 5 =$

b. $5 \times 2 \times 5 \times 4 =$

c. $9 \times 5 \times 2 \times 4 =$

d. $7 \times 5 \times 3 \times 2 \times 3 =$

72

Day 19: Putting It All Together (II)

Part 1: Reviewing the Concepts

Use what you know about multiplication to complete the following exercises. Look back in the Student Module Booklet if you need to review any of the concepts you have learned. You are to complete **all** of the questions in Part 1.

④

1. Draw base ten diagrams to show 37×4 . Complete the multiplication sentence.

$$37 \times 4 = \underline{\hspace{2cm}}$$

⑧

2. Multiply the numbers below using the **expansion** method.

a.
$$\begin{array}{r} 64 \\ \times 8 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 86 \\ \times 4 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 97 \\ \times 9 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 88 \\ \times 8 \\ \hline \end{array}$$

⑧

3. Multiply the following numbers using the **long form** for multiplication.

a.
$$\begin{array}{r} 53 \\ \times 8 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 44 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c. } 75 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d. } 27 \\ \times 5 \\ \hline \end{array}$$

④

4. Multiply the following numbers using the **short form** for multiplication.

$$\begin{array}{r} \text{a. } 72 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{b. } 45 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{c. } 81 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{d. } 39 \\ \times 6 \\ \hline \end{array}$$

②

5. Round to the nearest 10.

a. 834 _____

b. 609 _____

②

6. Round to the nearest 100

a. 417 _____

b. 388 _____

- ④ 7. Draw base ten diagrams to show 334×6 . Write the complete multiplication sentence.

- ④ 8. Multiply the following numbers by using **expansion**.

a.
$$\begin{array}{r} 753 \\ \times 6 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 875 \\ \times 7 \\ \hline \end{array}$$

⑧

9. Multiply the following numbers using the **long form** for multiplication.

a.
$$\begin{array}{r} 588 \\ \times 5 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 856 \\ \times 4 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 769 \\ \times 8 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 480 \\ \times 7 \\ \hline \end{array}$$

⑧

10. Multiply the following numbers using the **short form** for multiplication. Show your regrouping.

a.
$$\begin{array}{r} 567 \\ \times 7 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 856 \\ \times 9 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 429 \\ \times 8 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 803 \\ \times 5 \\ \hline \end{array}$$

11. Solve the following word problems by first estimating and then finding the actual answer. Show all your work and write a sentence that answers the question.

⑤

- a. A new skating rink opened in Don's town. The first day 723 people came to skate. If the same number come to skate each day, how many people will have skated at the end of 7 days?

Estimate

Actual Product

Sentence answer: _____

⑤

- b. A hardware store has 9 different sizes of nails. The nails are stored in bins. Each bin contains 875 nails. How many nails does the hardware store have?

Estimate

Actual Product

Sentence answer: _____

⑤

- c. Adam likes to count vehicles that go by his house. One day he counted 53 cars and 35 trucks in 15 minutes. If that same number of cars and trucks passed his house every 15 minutes, how many more cars than trucks passed his house in an hour?

Estimate**Actual Product**

Sentence answer: _____

- ⑤ 12. Use the Looking for a Pattern strategy to solve this problem.

Darcy is making banners from squares of material. The first banner has 14 squares. The second has 23 squares. The third banner has 18 squares and the fourth has 27 squares. The fifth banner has 22 squares of material. If this pattern continues, which banner will have more than 50 squares of material?

10

Part 2: Challenge Activities

Choose **either** Activity A **or** Activity B or you may do both if you wish.

Activity A: Brushing Your Teeth

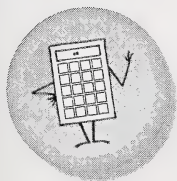
Write any multiplication sentences that you use to solve the problems. Show your calculations.

10

Use a calculator if you wish.

1.
 - a. It takes 3 minutes on average for you to brush your teeth. If you brush your teeth twice a day, for how many minutes do you brush your teeth in one week?
 - b. For how many minutes do you brush your teeth in one month?
 - c. For how many minutes do you brush your teeth in one year?

- d. For how many minutes would you brush your teeth in 75 years?
2. There are 60 seconds in one minute. How many seconds does the average person spend brushing their teeth in one week?
3. There are 60 minutes in 1 hour. Use your calculator to find out how many hours you spend brushing your teeth in one year.



10

Activity B: Products

How many multiplication sentences can you make with a product of 60?
Write them. An example is done for you.

Example: $2 \times 3 \times 2 \times 5 = 60$

Day 20: Assessing What You Know (II)



Home Instructor's Assessment Page for Day 20

Directions for the Home Instructor

Remove this sheet from the Assignment Booklet. Use the Checklist and Comments sections to help evaluate the student's work. When the Day 20 activities have been completed, firmly attach this sheet to Assignment Booklet 5B.

Student's Name _____

Home Instructor _____ Date _____

Indicate in the Checklist and Comments sections what you observe and hear as the student works through the assessment task. Encourage the student to “think out loud” as he or she works. As you observe, you may wish to use questions or prompts like the following to help in determining the student's level of understanding:

- How do you know this shows 463×4 ?
- Could you explain what you did?
- Is there another way you can show 463×4 ?
- How did you estimate that answer?

Checklist

- | | | |
|--|------------------------------|----------------------------------|
| A. The student can clearly show 463×4 . | <input type="checkbox"/> Yes | <input type="checkbox"/> Not yet |
| B. The student can explain how the regrouping is done. | <input type="checkbox"/> Yes | <input type="checkbox"/> Not yet |
| C. The student can multiply 463×4 using the expanded form. | <input type="checkbox"/> Yes | <input type="checkbox"/> Not yet |
| D. The student can multiply 463×4 using the long form. | <input type="checkbox"/> Yes | <input type="checkbox"/> Not yet |
| E. The student can multiply 463×4 using the short form. | <input type="checkbox"/> Yes | <input type="checkbox"/> Not yet |
| F. The student can estimate the product. | <input type="checkbox"/> Yes | <input type="checkbox"/> Not yet |

Comments

Add any comments you have regarding the student's performance on the assessment task or any other information about the student's learning experiences in this module that you would like to share with the teacher.

Day 20: Assessing What You Know (II)

Student's Assessment Page for Day 20

Student's Name _____

11

Part 1: Showing What You Can Do

Note: You may use any manipulatives or cut-out learning aids available to help solve the following problems.

1. Estimate the product of 463×4 .

2

3

2. Use base ten blocks to draw and multiply 463×4 . Write the complete multiplication sentence.

② 3. Multiply 463×4 using the expanded form.

② 4. Multiply 463×4 using the long form.

② 5. Multiply 463×4 using the short form.

5

Part 2: Basic Number Facts

This section contains a timed tests. Ask your home instructor to time you as you do the test. Wait for your home instructor to tell you when to begin. **Do not mark this test. It will be marked by your teacher.**

Multiplication Number Facts

Timed Test: 2 minutes

$$\begin{array}{r} 8 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 4 \\ \hline \end{array}$$

$5 \times 4 =$

$8 \times 4 =$

$9 \times 7 =$

$7 \times 4 =$

$5 \times 6 =$

$$\begin{array}{r} 9 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$$

$6 \times 4 =$

$7 \times 5 =$

$5 \times 5 =$

$8 \times 9 =$

$9 \times 9 =$

$$\begin{array}{r} 8 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 7 \\ \hline \end{array}$$



If you finish before the two minutes are up, check your answers.

Part 3: Thinking About What You Know

This is a chance for you to assess your own knowledge and abilities in mathematics. Take a few minutes before you begin writing to look back through Days 1 to 20 in your Student Module Booklet. On what days did you learn new things? Was there anything you found difficult or hard to understand? What things did you enjoy? What things would you like to know more about?

Now, using complete sentences, finish the following paragraph starters. You may wish to talk over your ideas with your home instructor before you begin writing.

1. I think this module is mainly about _____

2. Some things I learned in Section 1 of this module are _____

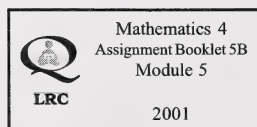
3. Some things I learned in Section 2 of this module are _____

4. One thing I liked about this module is _____

5. Something I don't really understand is _____

6. Something I would like to learn more about is _____

7. Something else I'd like to say is _____



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MS

ASSIGNMENT BOOKLET 5A

Mathematics 4
Module 5: Days 1–11

Home Instructor's and Student's Comments:

STUDENT FILE NUMBER
(if label is missing or incorrect)

Date Submitted:

Apply Module Label Here

Name

Address

Postal Code

*Please verify that preprinted label is for
correct course and module.*

FOR SCHOOL USE ONLY

Assigned Teacher:

Date Assignment Received:

Grading:

Teacher's Comments

Teacher's Signature

Home Instructor: Keep this sheet when it is returned to you as a record of the student's progress.

INSTRUCTIONS FOR SENDING IN THIS DISTANCE LEARNING ASSIGNMENT BOOKLET

When you register for distance learning courses, you are expected to send in Assignment Booklets for corrections regularly. Try to send each Assignment Booklet as soon as you have completed it. Before sending your Assignment Booklet, please check the following:

- Are all the assignments completed? If not, explain why.
- Has your work been reread to be sure the spelling and details are correct?
- Is the record form filled out and the correct module label attached?

MAILING

1. Postage Regulations

Do **not** enclose letters with Assignment Booklets.

Send all letters in a separate envelope.

2. Postage Rates

Take your Assignment Booklet to the post office and have it weighed. Attach enough postage and seal the envelope. Assignment Booklets will travel faster if correct postage is used and if they are in large envelopes that are no more than two centimetres thick.

FAXING

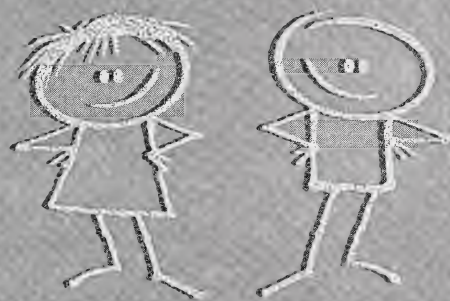
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2. All faxing costs are the responsibility of the sender.

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Assignment Booklets may be e-mailed. Contact your teacher for the e-mail address.

Mathematics 4

Module 5 Multiplication



Assignment Booklet 5A



Learning
Technologies
Branch

Alberta
LEARNING

FOR TEACHER'S USE ONLY

Summary

	Total Possible Marks	Your Mark
Day 1	24	
Day 2	30	
Day 3	21	
Day 4	26	
Day 5	38	
Day 6	28	
Day 7	43	
Day 8	31	
Day 9	26	
Day 10	(1) 80	
	(2) 10	
Day 11	(1) 9	
	(2) 5	
Total	371	

Teacher's Comments

This document is intended for

Students	✓
Teachers	✓
Administrators	
Home Instructors	✓
General Public	
Other	

Mathematics 4
Module 5: Multiplication
Assignment Booklet 5A
Learning Technologies Branch
ISBN 0-7741-1829-6

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ASSIGNMENT BOOKLET 5A

MATHEMATICS 4 – MODULE 5: MULTIPLICATION

Notes to the Home Instructor

Learning Tasks

The nine mathematics modules and the accompanying Assignment Booklets have been developed so that students become involved in a variety of learning tasks that help them develop mathematical skills, learn how to communicate mathematically, and become mathematical problem solvers.

When completing the assignments, students should work carefully and neatly. Students should do the activities in the Assignment Booklets **independently**. This will ensure that the teacher acquires a more accurate picture of the student's ability and understanding.

If the student is having difficulties, he or she should review the appropriate sections in the Student Module Booklet. The home instructor can assist the student by reviewing these sections with the student and encouraging him or her to explain, describe, or demonstrate (using manipulatives, drawings, and so on) his or her understanding of a particular concept or idea.

Assessment and Evaluation

A broad range of assessment tools will be used to gather information for the purpose of evaluating the student's knowledge and understanding of curriculum skills and concepts. It is important that the teacher learns how the student thinks about mathematics as well as what concepts and skills the student has mastered. Assignment Booklet questions, journal entries, performance assessments, observations by the home instructor, and student self-evaluation pages may all be used. As well, the teacher may also use a final test.

In order to give the student and home instructor feedback on the student's current level of achievement throughout the school year, the student's teacher will provide written comments and assign a grade at the end of each module. The mark for each module will be determined primarily by how well the student completes the assignments in the Assignment Booklets. However, other broad-based assessment techniques (journal entries, performance assessments, and so on) may also be used.

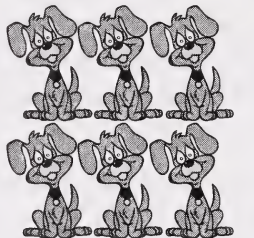
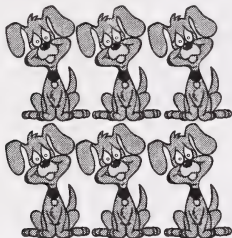
24

Day 1: Addition and Multiplication

1. Write a multiplication sentence and a repeated addition sentence for each of the following pictures.

②

- a. How many puppies are there?



1

Multiplication sentence: _____

Addition sentence: _____

②

- b. How many leaves are there?

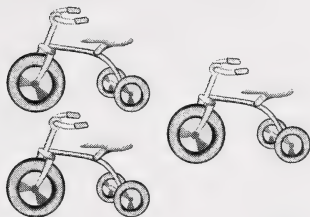


Multiplication sentence: _____

Addition sentence: _____

②

c. How many wheels are there?



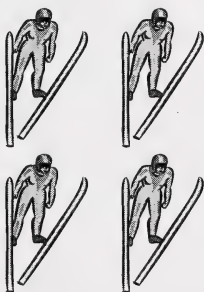
1

Multiplication sentence: _____

Addition sentence: _____

②

d. How many skis are there?



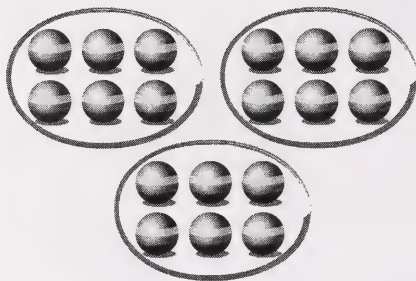
2

Multiplication sentence: _____

Addition sentence: _____

2. Draw a picture for each multiplication fact. Then write a multiplication sentence for each picture you drew. An example is done for you.

Example: 3×6



Multiplication sentence: $3 \times 6 = 18$

②

a. 9×2

Multiplication sentence: _____

②

b. 4×5

Multiplication sentence: _____

②

c. 7×4

Multiplication sentence: _____

⑤

3. Complete each of these multiplication facts.

a. $2 \times 2 =$

b. $3 \times 3 =$

c. $4 \times 4 =$

d. $5 \times 2 =$

e. $4 \times 3 =$

f. $5 \times 5 =$

g. $3 \times 8 =$

h. $4 \times 2 =$

i. $3 \times 6 =$

j. $6 \times 4 =$

k. $5 \times 4 =$

l. $6 \times 5 =$

m. $5 \times 3 =$

n. $1 \times 1 =$

o. $2 \times 4 =$



4.

Journal Entry

5

Think about what you have learned in Day 1. Then, on the lines below, explain what multiplication is and when you would use it in your everyday life. Give one example of a time when you would use multiplication.

30

Day 2: Understanding Multiplying

- 3 1. Write **product** or **factor** to name each circled number.

a. $4 \times (9) = 36$ _____

b. $(49) = 7 \times 7$ _____

c. $(7) \times 8 = 56$ _____

- 3 2. Write the factors and products for the following questions. An example has been done for you.

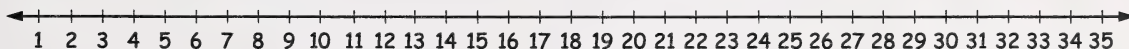
Example: 4 sevens = $4 \times 7 = 28$

a. 5 threes = _____

b. 7 fives = _____

c. 2 nines = _____

- 1 3. Skip count by 5s to 35 using the number line. Mark each hop or skip.



③

5. Fill in the missing numbers.

a. 3, 6, _____, _____, _____, 18, 21, _____, _____, _____

b. _____, 16, 18, _____, _____, _____, 26, 28, _____

c. 21, 28, 35, _____, _____, _____, _____

6. Use the repeat or constant function on your calculator. Key in

$\boxed{4}$ $\boxed{+}$ $\boxed{4}$ $\boxed{=}$. Press the $\boxed{=}$ key eight more times. Record the numbers you get on the lines below.

Remember, if you do not have the repeat or constant function on your calculator, you will have to do this:

Key in $\boxed{4}$ $\boxed{+}$ $\boxed{4}$ $\boxed{=}$. Then key in $\boxed{+}$ $\boxed{4}$ $\boxed{=}$ eight more times.

②

a. 4, _____, _____, _____, _____, _____, _____, _____, _____, _____.

Choose a number between 2 and 9. You should choose a number you have already tried. Use the repeat or constant function to find the next nine numbers in the pattern. Write the numbers on the lines below.

①

b. _____, _____, _____, _____, _____, _____, _____, _____, _____, _____.

7. Use the multiplication facts chart that you completed in Day 1 to answer the following questions.

②

- a. Explain how you would find the product of 7×6 .

③

- b. Find these products.

$$8 \times 8 = \underline{\hspace{2cm}} \qquad 6 \times 9 = \underline{\hspace{2cm}} \qquad 9 \times 8 = \underline{\hspace{2cm}}$$

$$8 \times 7 = \underline{\hspace{2cm}} \qquad 7 \times 9 = \underline{\hspace{2cm}} \qquad 9 \times 6 = \underline{\hspace{2cm}}$$

③

8. Write the complete multiplication sentence for each problem. Give a word answer. An example is done for you.

Example: How many shoes are there on 9 people? $9 \times 2 = 18$ shoes

- a. How many legs are there on 7 horses? $\underline{\hspace{2cm}}$

- b. How many arms are there on 8 octopuses?

- c. How many leaves are there on 6 four-leaf clovers?

21

Day 3: Arrays and Multiplying

2

1. Complete the following questions to show that the order of factors does not affect the product. An example has been done for you.

Example: $5 \times 4 = 4 \times 5 = 20$

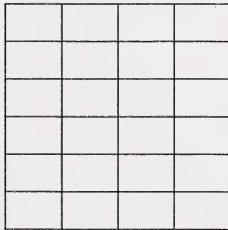
a. $5 \times 2 =$ _____

b. $3 \times 4 =$ _____

2. Write **two** multiplication sentences for each of the following arrays. Then write the multiplication sentence to show that the order of the factors does not change the product.

1

a.



- _____
- _____
- _____

1

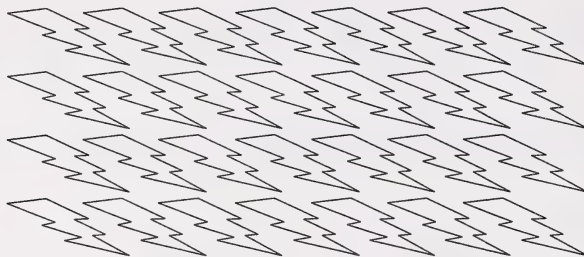
b.



- _____
- _____
- _____

①

c.



- _____
- _____
- _____

3. Draw pictures to show each of these arrays. Complete the multiplication sentence for each.

②

a. $3 \times 5 =$ _____

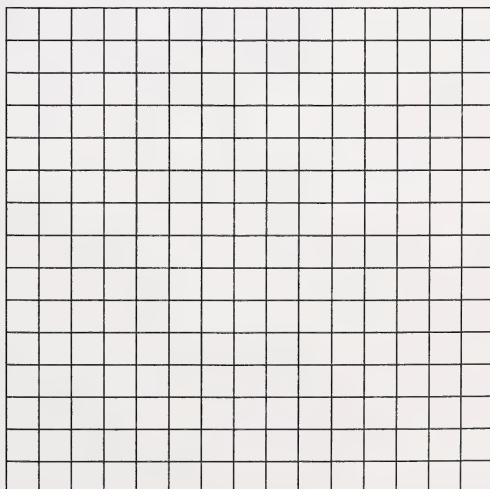
②

b. $4 \times 8 =$ _____

④

4. Use pencil crayons or felt markers to colour the squares in the grid to make each of the following arrays. Under each array, write the multiplication sentence that names the array.

- 7×3
- 5×5



- ② 5. Write the product for each of the following questions.
- a. $0 \times 8 =$ _____ b. $15 \times 0 =$ _____
- c. $119 \times 0 =$ _____ d. $0 \times 100 =$ _____
- ② 6. In your own words, tell what happens when you multiply any number by zero.
- _____
- _____
- _____
- ② 7. Find these products.
- a. $1 \times 8 =$ _____ b. $15 \times 1 =$ _____
- c. $48 \times 1 =$ _____ d. $153 \times 1 =$ _____
- ② 8. In your own words, tell what happens when you multiply any number by 1.
- _____
- _____
- _____

26

Day 4: Different Arrays, Same Product

4

1. Complete the following multiplication sentences. Think of which two factors multiplied together will give you the product. An example is done for you.

Example: $4 \times 2 = 8$

a. $7 \times \underline{\quad} = 49$

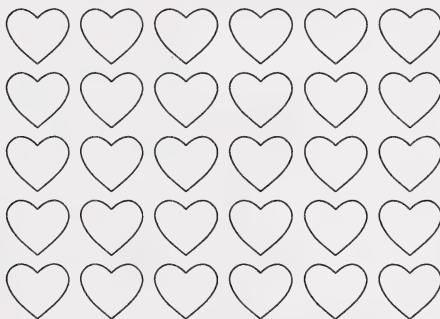
b. $5 \times \underline{\quad} = 20$

c. $\underline{\quad} \times 8 = 56$

d. $6 \times \underline{\quad} = 48$

1

2. a. How many objects are in this array? _____



2

- b. Write two multiplication sentences for the array.

• _____

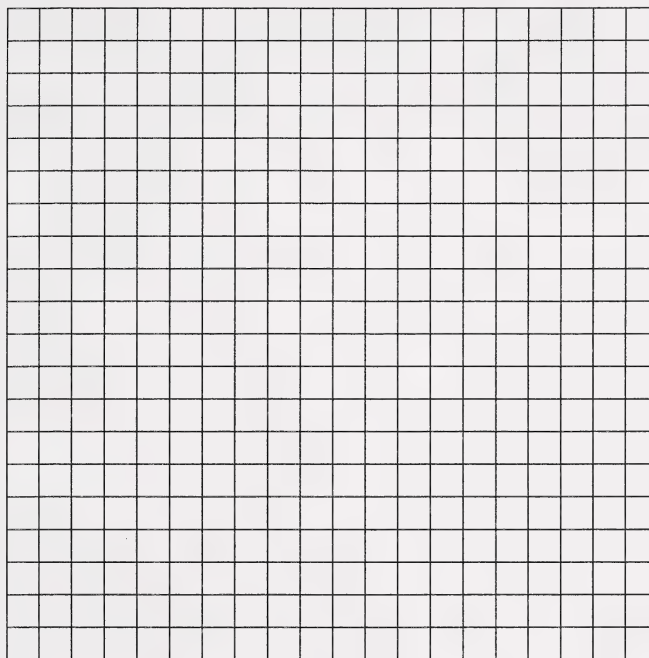
• _____

- ② 3. a. Rearrange the hearts from question 2 into two equal rows. Draw the new array.

- ② b. Write **two** multiplication sentences for the new array.

- _____
- _____

- ⑤ 4. How many arrays can you make with 16 manipulatives? Draw the arrays on the grid and write the multiplication sentence for each.



- ⑤ 5. What is a square number? Use your own words to explain. Give **two** examples of square numbers.

Example 1: _____

Example 2: _____



6.

Journal Entry

5

Where have you seen an array? Look around your home, in a store, at a restaurant, or around your neighbourhood. Look for arrangements of equal rows and columns of objects. Give two examples of arrays that you find and tell why you think the objects were arranged in that way.

38

Day 5: Splitting Arrays

③

1. a. Draw a 4×7 array and write the multiplication sentence for it.

Multiplication sentence: _____

④

- b. Split the array and write the two multiplication sentences for the new arrays.

Multiplication sentences: • _____

• _____

②

- c. Write the arithmetic sentence and find the total number of objects in the arrays.

$$\begin{aligned} & (\text{ } \times \text{ }) + (\text{ } \times \text{ }) \\ = & \text{ } + \text{ } \\ = & \text{ } \end{aligned}$$

④

2. a. Draw the 4×7 array again and split it in a different way. Write the two multiplication sentences for the new arrays.

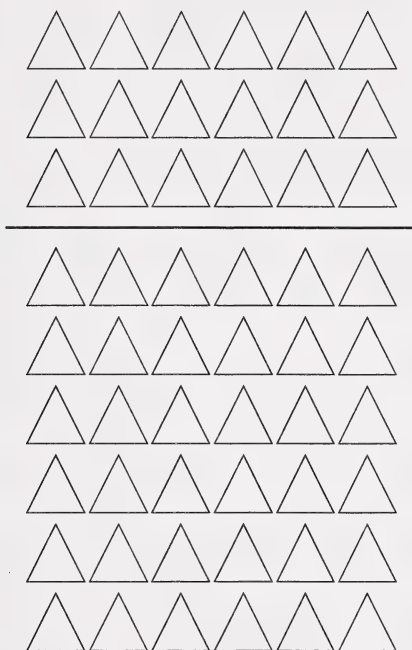
Multiplication sentences: • _____
• _____

②

- b. Write the arithmetic sentence and find the total number of objects.

$$\begin{aligned} & (\text{ } \times \text{ }) + (\text{ } \times \text{ }) \\ = & \text{ } + \text{ } \\ = & \text{ } \end{aligned}$$

②

3. a. Look at this array that shows 9×6 .Write the multiplication sentences for the **split** array.

- _____
- _____

②

b. Write the arithmetic sentence and find the total number of objects in the array.

$$\begin{aligned}
 & (\text{ } \times \text{ }) + (\text{ } \times \text{ }) \\
 = & \text{ } + \text{ } \\
 = & \text{ }
 \end{aligned}$$

①

c. Use a coloured crayon to draw a line that splits the array to show the multiplication sentences 5×6 and 4×6 .

- ② d. Fill in the blanks of the arithmetic sentence. Find the total number of objects in the array.

$$\begin{aligned} 9 \times 6 &= (5 \times 6) + (\underline{\quad} \times \underline{\quad}) \\ &= 30 + \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

- ③ 4. Complete the following questions. More than one answer is possible. An example is done for you.

Example: 6 threes = 4 threes + 2 threes

a. 8 sevens = _____

b. 5 sixes = _____

c. 7 twos = _____

5. Complete the following multiplication facts. Choose the split that is easiest for you. There are many possible answers. An example is done for you.

$$\begin{aligned} \text{Example: } 9 \times 4 &= (5 \times 4) + (4 \times 4) \\ &= 20 + 16 \\ &= 36 \end{aligned}$$

③ a. $6 \times 8 =$ _____
= _____
= _____

③ b. $7 \times 9 =$ _____
= _____
= _____

③

6. Multiply by 10 to find these products.

a. $6 \times 10 =$ _____

b. $4 \times 10 =$ _____

c. $8 \times 10 =$ _____

d. $43 \times 10 =$ _____

e. $68 \times 10 =$ _____

f. $435 \times 10 =$ _____

②

7. Multiply by 100 to find the following products.

a. $6 \times 100 =$ _____

b. $45 \times 100 =$ _____

c. $67 \times 100 =$ _____

d. $98 \times 100 =$ _____

②

8. Multiply by 1000 to find the following products.

a. $5 \times 1000 =$ _____

b. $54 \times 1000 =$ _____

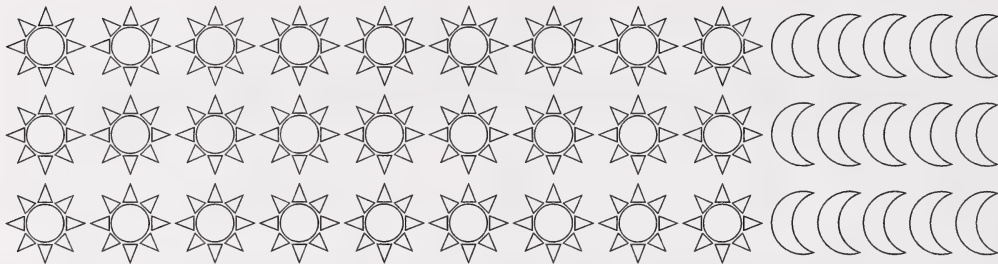
c. $78 \times 1000 =$ _____

d. $63 \times 1000 =$ _____

28

Day 6: Splitting Larger Arrays

- ① 1. a. Estimate how many suns and moons there are altogether in the following diagram. _____



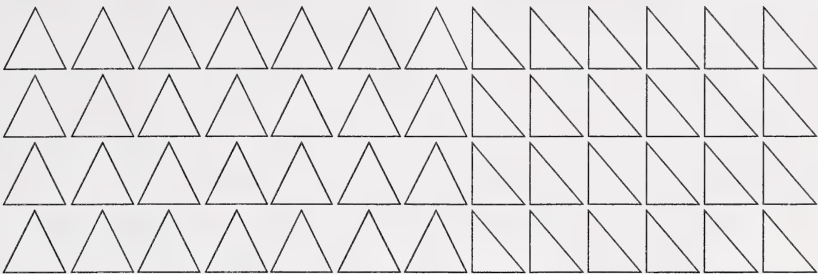
- ② b. How did you estimate?

- ② c. Write **two** multiplication sentences for the two smaller arrays.

- _____
- _____

- ③ d. Write the arithmetic sentence and find the total number of suns and moons in the array.

① 2. a. Estimate the number of triangles in the following array. _____

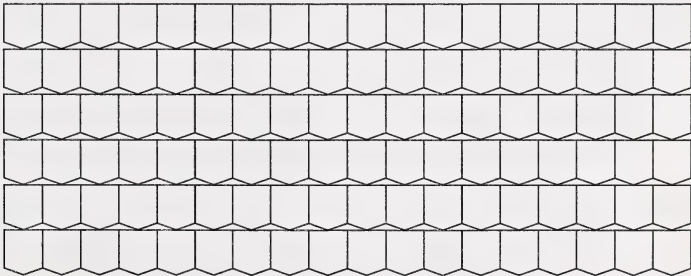


② b. Write **two** multiplication sentences for the two smaller arrays.

• _____ • _____

③ c. Write the arithmetic sentence and find the total number of triangles in the array.

① 3. a. Estimate how many objects are in the following array. _____



② b. Draw a line to split the array into two smaller arrays. Choose a split that will make it easy for you to find the total number of objects in the array. Write the multiplication sentences for each of the two smaller arrays.

• _____ • _____

- ③ c. Write the arithmetic sentence and find the total number of objects in the array.

- ④ 4. a. Fill in the blanks of these arithmetic sentences to show the different ways that a 5×12 array can be split.

$$\bullet 5 \times 12 = (5 \times 11) + (5 \times 1)$$

$$\bullet 5 \times 12 = (5 \times 10) + (5 \times \underline{\quad})$$

$$\bullet 5 \times 12 = (5 \times \underline{\quad}) + (5 \times \underline{\quad})$$

$$\bullet 5 \times 12 = (5 \times \underline{\quad}) + (5 \times \underline{\quad})$$

$$\bullet 5 \times 12 = (5 \times \underline{\quad}) + (5 \times \underline{\quad})$$

$$\bullet 5 \times 12 = (5 \times \underline{\quad}) + (5 \times 6)$$

- ② b. Solve the problem 5×12 by using one of the arrays in question 4.a. Choose the arithmetic sentence that is easiest for you to solve.

$$5 \times 12 = (\underline{\quad}) + (\underline{\quad})$$

$$= \underline{\quad} + \underline{\quad}$$

$$= \underline{\quad}$$

②

5. Find the products of these factors that contain zeros at the end. Use the Tacking on Zeros strategy.

a. $40 \times 70 =$ _____

b. $80 \times 90 =$ _____

c. $900 \times 30 =$ _____

d. $200 \times 80 =$ _____

43

Day 7: Multiples

①

1. a. Write the multiples of 8 to 72.

8, _____, _____, _____, _____, _____, _____, _____, _____, 72

③

- b. Is 80 a multiple of 8? _____

Explain. _____

③

- c. Is 17 a multiple of 8? _____

Explain. _____

①

2. a. Write the first 6 multiples of 9.

_____, _____, _____, _____, _____, _____

②

- b. Explain why they are multiples of 9. _____

①

- c. What are **two** other multiples of 9?



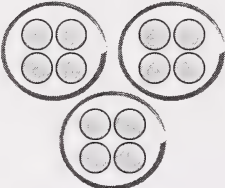
• _____ • _____

- ① 3. a. 14, 21, and 28 are multiples of what number? _____
- ② b. How do you know? _____

- ① c. Write two other multiples of this number.
• _____ • _____
- ② 4. a. Why are these numbers multiples of 5? Explain.
35, 50, 40, 25

- ③ b. Does 16 belong in the above set of numbers? _____
Explain. _____

- ③ 5. a. Follow the pattern shown to fill in the next three boxes. Write the multiplication sentence for each box.

	$1 \times 4 = 4$
	$2 \times 4 = 8$
	$3 \times 4 = 12$

- ① b. Predict how many marbles will be in the 8th box.

- ② c. Tell how you made your prediction.

- ② 6. Turn to page 37 of your textbook. Do questions 3 of On Your Own.



On Your Own, Question 3

How many multiples of 10 are there between 245 and 375? Write the numbers to prove your answer.

- ③ 7. Continue these patterns.

a. 12, 14, 16, _____, _____, _____, _____

b. 16, 20, 24, _____, _____, _____, _____

c. 18, 21, 24, _____, _____, _____, _____

- ⑧ 8. Explain what happens in each of the following multiplication situations. Give an example for each.

Examples

a. Odd \times Even = _____

b. Even \times Even = _____

c. Odd \times Odd = _____

d. Even \times Odd = _____

- ④ 9. Tell if the following products will be odd or even. You **do not** need to solve.

a. $6 \times 6 =$ _____

b. $5 \times 3 =$ _____

c. $4 \times 7 =$ _____

d. $124 \times 426 =$ _____

31

Day 8: More About Factors

12

1. Complete the following. Use brackets to show how you grouped the numbers.

a. $5 \times 3 \times 2 =$

b. $6 \times 4 \times 1 =$

c. $4 \times 10 \times 2 =$

d. $3 \times 2 \times 4 =$

9

2. Complete the following questions by changing the way the factors are grouped. An example is done for you.

Example: $3 \times 3 \times 2 = 3 \times 3 \times 2$

$$(3 \times 3) \times 2 = 3 \times (3 \times 2)$$

$$9 \times 2 = 3 \times 6$$

$$18 = 18$$

a. $7 \times 1 \times 2 = 7 \times 1 \times 2$

b. $5 \times 2 \times 4 = 5 \times 2 \times 4$

c. $6 \times 3 \times 10 = 6 \times 3 \times 10$

- ④ 3. Complete the following multiplication questions that involve the number 9.

a.
$$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 9 \\ \times 3 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 9 \\ \times 7 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 9 \\ \times 9 \\ \hline \end{array}$$

- ② 4. What do you notice about the first digit in each product in question 3?

- ④ 5. Add the digits in each of the products in question 3. The first one is done for you as an example.

a. Sum: $4 + 5 = 9$ _____

b. Sum: _____

c. Sum: _____

d. Sum: _____

Is the sum of the digits always 9? _____

26

Day 9: Using Multiplication to Solve Word Problems

For the following word problems, write a multiplication sentence and a word sentence that answers the question.

②

1. Jill has 9 plates of cookies for the bake sale. On each plate there are 7 cookies. How many cookies will Jill take to the bake sale?

②

2. Amir's friend lives 6 blocks away. If he visits his friend 5 times a week, how many blocks does he walk to get there?

②

3. Sophie received 7 loonies for her birthday. She wants to change them into quarters. How many quarters will she get?

To solve the following problems, you will need to do **two operations**. You will need to multiply and then add or subtract. Show all your work. Use a word sentence to answer the question that is asked.

- ③ 4. Mala has 7 baseball cards. Wally has 8 times as many. How many baseball cards do they have altogether?

- ③ 5. Joanne has grown 9 cm a year for the last 5 years. She was 98 cm tall 5 years ago. How tall is she now?

- ③ 6. Six boys and six dogs are in a field. How many legs are there in the field?

7. Double the following numbers. Show your work. An example has been done for you.

Example: Double 47.

$$\begin{array}{r} 47 = 40 + 7 \\ \quad \times \quad 2 \\ \hline = 80 + 14 \\ = 94 \end{array}$$

- ② a. Double 35.

②

b. Double 86

②

c. Double 123



8.

Journal Entry

5

Think of a time when you have used doubling to calculate something in your head. Tell about it. What are the most difficult numbers you have doubled in your head?

Day 10: Putting It All Together (I)

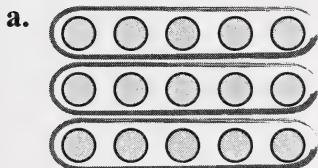
80

Part 1: Reviewing the Concepts

Use what you know about multiplication to complete the following exercises. Look back in the Student Module Booklet if you need to review any of the concepts you have learned. You are to complete **all** of the questions in Part 1.

1. Write a multiplication sentence and a repeated addition sentence for the following arrays.

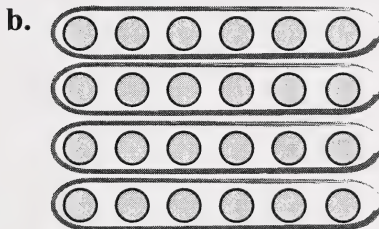
②



Multiplication sentence: _____

Addition sentence: _____

②



Multiplication sentence: _____

Addition sentence: _____

2. Draw an array and write a multiplication sentence for each of the following.

②

- a. 4 groups of 8

Multiplication sentence: _____

②

- b. 2 groups of 6

Multiplication sentence: _____

- ② c. 5 groups of 7

Multiplication sentence: _____

- ② 3. Tell whether each circled number is a **product** or a **factor**.

a. $6 \times (8) = 48$ _____ b. $9 \times 3 = (27)$ _____



4.

Journal Entry

⑤

Explain why knowing how to multiply is useful to you. What have you used multiplying to help you do?

③ 5. Complete the following patterns.

a. _____, _____, 12, 16, 20, _____, _____, _____, _____

b. _____, _____, _____, 20, 25, _____, _____, 40, _____, _____

c. _____, _____, _____, 36, 45, 54, _____, _____, _____, _____

② 6. a. The numbers 16, 24, 32, and 40 are all multiples of 8. How do you know they are multiples of 8?

② b. Is 35 a multiple of 8? Explain why or why not.

② c. Write two other multiples of 8.

• _____ • _____

② 7. a. Which one of these numbers is not a multiple of 4? Circle it.

16 24 20 26 28

b. Write one other number that is not a multiple of 4. _____

- ③ 8. Draw a 4×6 array. Write a multiplication sentence and a repeated addition sentence for the array.

Multiplication sentence: _____

Repeated addition sentence: _____

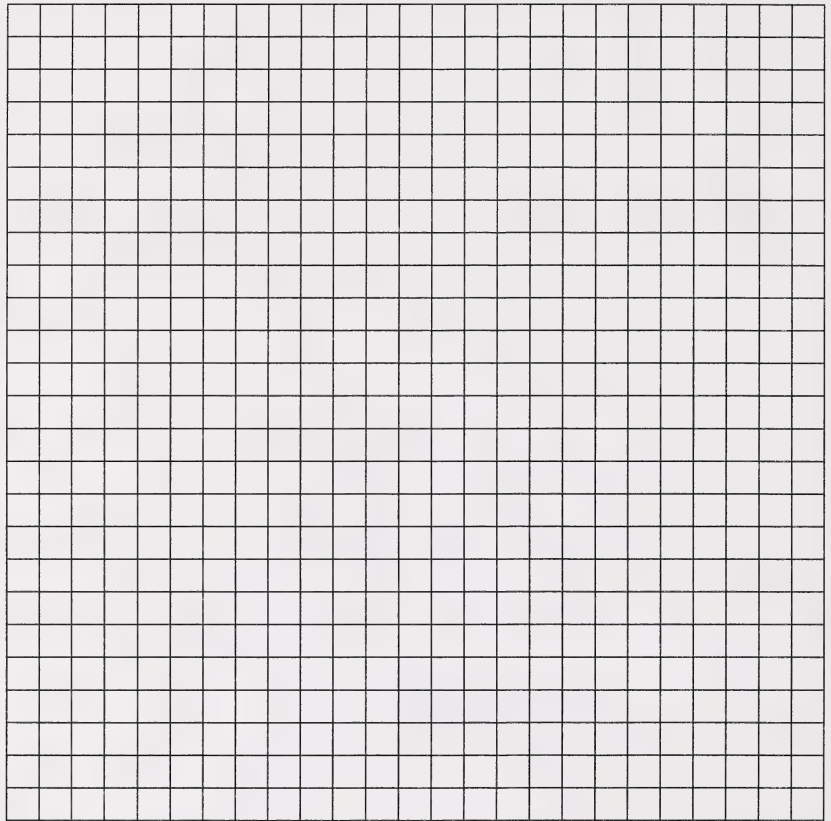
- ② 9. Look at the following array and write **two** multiplication sentences for it.



- _____
- _____

⑧

- 10. a.** Shade in squares on the grid to show how many arrays you can make with 24 objects. Write a multiplication sentence below each array.

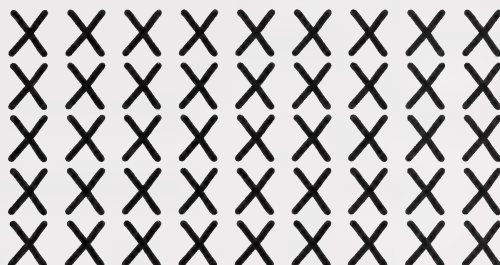


④

- b.** Which pairs are related? Show how you know they are related.

④

11. Look at these 9×5 arrays. Split each array in a different way by drawing a line. Write the arithmetic sentence for each array and then solve.

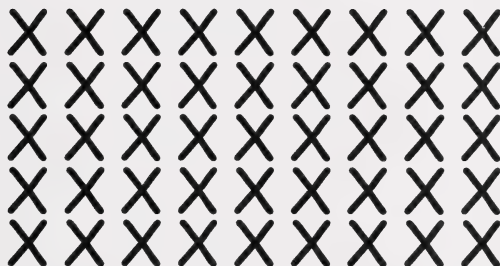


$$9 \times 5 = \underline{\hspace{2cm}}$$

Arithmetic

sentence: $(\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}})$

Solution:



$$9 \times 5 = \underline{\hspace{2cm}}$$

Arithmetic

sentence: $(\underline{\hspace{1cm}} \times \underline{\hspace{1cm}}) + (\underline{\hspace{1cm}} \times \underline{\hspace{1cm}})$

Solution:

②

12. Fill in the missing numbers.

- a. 8 fours is the same as 7 fours and _____ four.
- b. 8 fours is the same as 6 fours and _____ fours.
- c. 8 fours is the same as 5 fours and _____ fours.
- d. 8 fours is the same as 4 fours and _____ fours.

13. Split these numbers to solve. Write and complete the arithmetic sentence for each. There are many possible answers. An example has been done for you.

Example: $7 \times 9 = (6 \times 9) + (1 \times 9)$
 $\quad\quad\quad = 54 + 9$
 $\quad\quad\quad = 63$

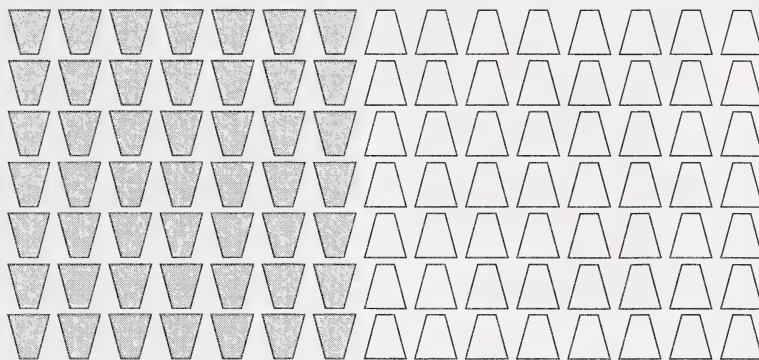
②

a. $5 \times 8 =$

②

b. $8 \times 6 =$

- ③ 14. Write and complete the arithmetic sentence for the following array.



- ① 15. a. Will the product of 6×88 be odd or even? _____

- ② b. How do you know? _____

- ③ 16. Multiply by 9. Use one of the strategies you learned in your lessons to solve these problems.

a. $8 \times 9 =$ _____ b. $9 \times 3 =$ _____ c. $7 \times 9 =$ _____

- ④ 17. Use the Tacking on Zeros strategy to complete the following products.

a. $623 \times 10 =$

b. $45 \times 100 =$

c. $50 \times 40 =$

d. $60 \times 70 =$

④

18. Fill in the missing factors.

a. _____ \times 8 = 64

b. _____ \times 5 = 45

c. 4 \times _____ = 36

d. 6 \times _____ = 48

④

19. Use brackets to group the factors. Then find the products.

a. $3 \times 2 \times 5 =$

b. $4 \times 5 \times 4 =$

20. Solve these word problems. Write a **multiplication sentence** and a **word sentence** to show your answer.

②

- a. Jacob ordered 5 packages of felt markers for his art project. Each package contained 8 markers. How many markers were there in all?

- ② b. Curtis saves \$7 a day. Jim saves \$4 a day. After 9 days, how much more money has Curtis saved than Jim?

10

Part 2: Challenge Activities

Choose **either** Activity A **or** Activity B, **or** you may do both if you wish.

Activity A: How Much Time Do You Spend Sleeping?

Use multiplication to help you answer the following questions about sleeping. Write down the multiplication sentences you use to solve these problems. You may use a calculator if you wish.

1. On average, you sleep about 8 hours a night.

- a. How many hours do you sleep in one week?

b. How many hours do you sleep in one month?

c. How many hours do you sleep in one year?

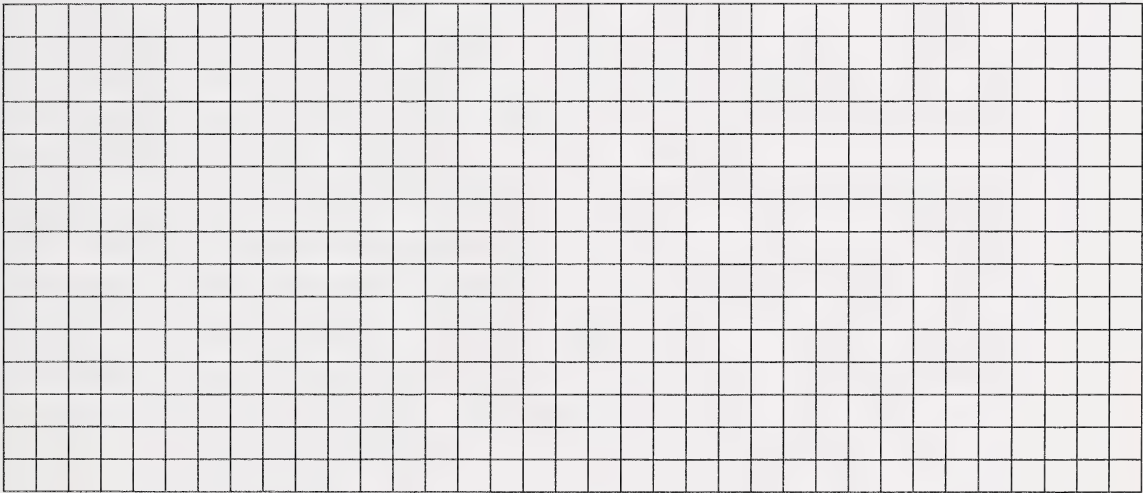
d. How many hours do you sleep in 70 years?

10

Activity B: Building with Bricks

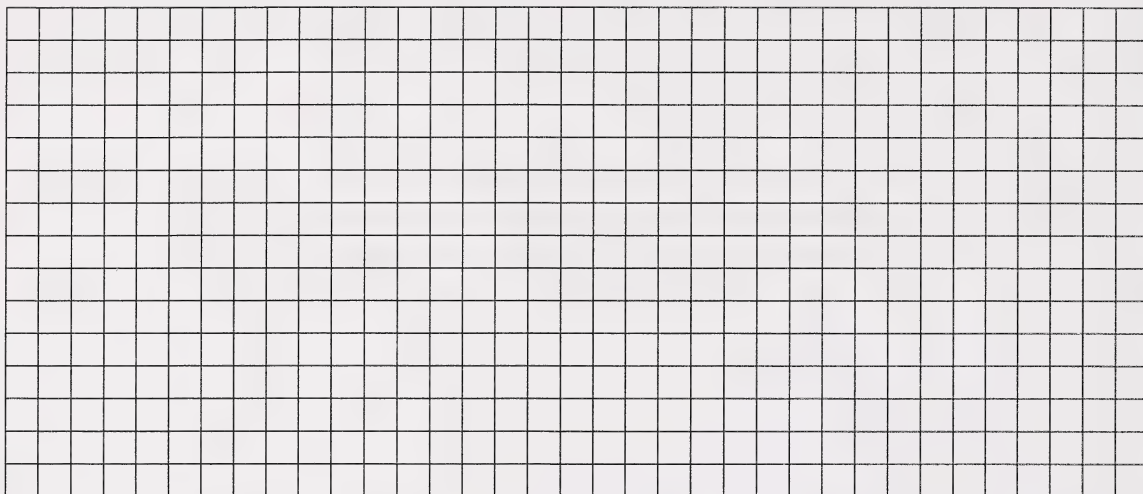
Miss Mayo has a pile of 48 large red bricks left over from her patio project. She would like to use the bricks to make an area near her garage to park her lawn mower and other garden equipment. She needs your help to plan this area.

- 1. Shade in, with a crayon, all the possible arrangements (arrays) for the 48 bricks on the grid below. Label each arrangement with a multiplication sentence. The grid will not allow you to make a 48×1 arrangement. That would not be suitable for storing garden equipment.



- 2. Which arrangement do you think would be best to fit Miss Mayo’s garden equipment? Why?
- ---

3. a. Colour the arrangement of 48 bricks that you have chosen. Use **red** and **one other colour** to split the array into two groups of bricks.

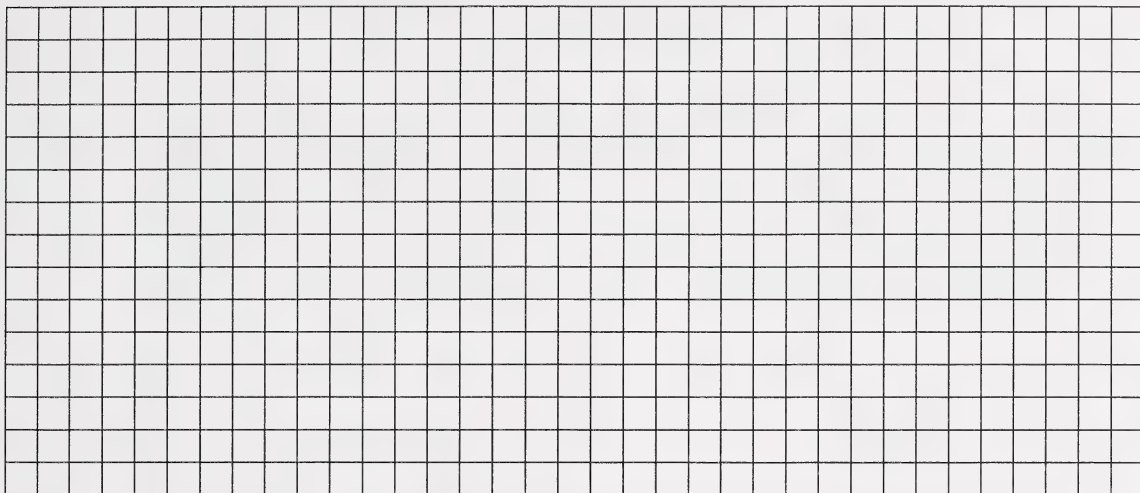


- b. Write multiplication sentences for the two coloured arrays.

• _____

• _____

4. a. Split the array of 48 bricks into 3 **different coloured** groups. Use three coloured crayons to shade in the arrays.



- b. Write the multiplication sentences for each coloured array.

- _____
- _____
- _____

Day 11: Assessing What You Know (I)



Home Instructor's Assessment Page for Day 10

Directions for the Home Instructor

Remove this sheet from the Assignment Booklet. Use the Checklist and Comments sections to help evaluate the student's work. When the Day 11 activities have been completed, firmly attach this sheet to Assignment Booklet 5A.

Student's Name _____

Home Instructor _____ Date _____

Indicate in the Checklist and Comments sections what you observe and hear as the student works through the assessment task. Encourage the student to “think out loud” as he or she works. As you observe, you may wish to use questions or prompts like the following to help in determining the student's level of understanding:

- Why did you draw your groups this way?
- Give me another example of this.
- How are you skip counting?
- How is multiplication like addition?
- Why did you draw the array this way?
- Is there another way to draw it?
- How do you know this shows 5×12 ?
- Why did you split the array this way?
- Is there another way to split it?
- When would you need to split a multiplication problem into smaller parts?

Checklist

- | | | |
|---|------------------------------|----------------------------------|
| A. The student understands that multiplication involves equal groups of similar objects. | <input type="checkbox"/> Yes | <input type="checkbox"/> Not yet |
| B. The student understands the connection between multiplication and repeated addition. | <input type="checkbox"/> Yes | <input type="checkbox"/> Not yet |
| C. The student can skip count on a number line. | <input type="checkbox"/> Yes | <input type="checkbox"/> Not yet |
| D. The student can create arrays based on multiplication facts or problems. | <input type="checkbox"/> Yes | <input type="checkbox"/> Not yet |
| E. The student can split arrays into smaller parts. | <input type="checkbox"/> Yes | <input type="checkbox"/> Not yet |
| F. The student can determine the product based on an array. | <input type="checkbox"/> Yes | <input type="checkbox"/> Not yet |
| G. The student is able to recall basic multiplication facts. | <input type="checkbox"/> Yes | <input type="checkbox"/> Not yet |

Comments

Add any comments you have regarding the student's performance on the assessment task or any other information about the student's learning experiences in this module that you would like to share with the teacher.

Day 11: Assessing What You Know (I)

Student's Assessment Page for Day 11

Student's Name _____

9

Part 1: Showing What You Can Do

Note: You may use any manipulatives or cut-out learning aids available to help solve the following problems.

1. Show the multiplication fact $4 \times 7 = 28$ in **four** different ways.

①

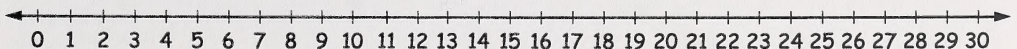
a. Draw a picture of equal groups.

①

b. Use repeated addition.

①

c. Skip count on a number line.



①

d. Draw an array.

②

2. a. Draw a 5×12 array. Draw a line to split the array.

①

b. Write a multiplication sentence for each part of the split array.

• _____

• _____

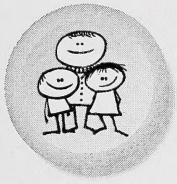
②

c. Explain how splitting this large array can help you solve the multiplication problem.

5

Part 2: Basic Number Facts

Ask your home instructor to time you as you do this test. Wait for your home instructor to tell you when to begin. **Do not mark this test. It will be marked by your teacher.**



Multiplication Number Facts

Timed Test: 2 minutes

$$\begin{array}{r} 8 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 4 \\ \hline \end{array}$$

$7 \times 7 =$

$8 \times 9 =$

$5 \times 8 =$

$7 \times 4 =$

$8 \times 8 =$

$$\begin{array}{r} 6 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 9 \\ \hline \end{array}$$

$6 \times 8 =$

$7 \times 5 =$

$6 \times 6 =$

$4 \times 8 =$

$9 \times 3 =$

$$\begin{array}{r} 8 \\ \times 0 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 6 \\ \hline \end{array}$$



If you finish before the two minutes are up, check your answers.

